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| 09/699,773 | 10/30/2000 | Tara Lynn Alvarez | 2-4-3 | 7026 |
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| WILLIAMS, MORGAN & AMERSON 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042 | | | SHAH, CHIRAG G | |
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| | | | 2616 | |

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/699,773

Applicant(s)

ALVAREZ ET AL.

Examiner

Chirag G. Shah

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 12-20 is/are rejected.
- 7) ☒ Claim(s) 4-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 18 recites the limitation "the DSI" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is not clear if the "the DSI" is referring to the "received DSI" or "initial DSI."

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 12 and 16-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Gurusami et al. (U.S. Patent No. 6,031,846), hereinafter referred as Gurusami in view of Valencia (U.S. Patent No. 6,650,652) and further in view of Ellis et al (U.S. Patent No. 5,4973,71)

Regarding claim 1, Gurusami discloses a method for transmitting DSI (Delay Sensitive Information) over a communication link of a communication network [each receiver transmits packets of telephony-voice communication over a link to each

transmitter after applying a delay factor for each transmitter, col. 7, lines 57 to col. 8, lines 5 and see fig. 10] the method comprising the steps of:

transmitting an initial DSI after selectively applying a delay to the initial DSI
[each receiver transmits packets of telephony-voice communication to each transmitter after applying a delay factor for each transmitter, col. 7, lines 57 to col. 8, lines 5 and see fig. 10; Note: according to col. 7, lines 57 to col. 8, lines 10.

Gurusami et al establishes that the delay factor is determined based on the packet arrival time and Gurusami selectively applies the delay at each transmitter based on the packet arrival time from the corresponding transmitter. By amending the claim to include the word, "selectively", does not further limit the claim since, "selectively" based on the given broadest reasonable interpretation consistent with the specification suggests merely applying delay to some or all received delay sensitive information (DSI) packets.]
where

such delay is based on a determined periodicity of received DSI **[the receiver first measures a packet arrival time of each packet from each transmitter and determines a delay factor for each transmitter, each of the transmitter delay factors being dependent upon the packet arrival time from the corresponding transmitter, see col. 7, lines 40-60 and fig. 10; Note: periodicity is the consecutive packets being received by the receiver with respective arrival times from which the receiver determines the delay factor]**. Although Gurusami discloses in col. 7, lines 40-45 of packets of telephony and data, *Gurusami fails to explicitly identify or distinguish a received delay sensitive information (DSI) and non-delay sensitive information (NDSI).* Valencia

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discloses in figure 4 and col. 9, lines 9-31 when the receiver being able to distinguish by monitoring if a latency-sensitive packet such as a UDP voice packet is received or latency-insensitive packet such as data. Based on the latency sensitivity of the packet, default action of transmission with respect to fragmentation or without fragmentation takes place. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Gurusami to include the features of distinguishing between delay sensitive and delay insensitive packets as taught by Valencia. One is motivated as such in order to cause a downlink to increase the size of a maximum allowed transferable unit for the link.

Gurusami in view of Valencia fails to explicitly disclose a defined length of NDSI (Non-delay sensitive information) being transmitted. Ellis et al teaches of an efficient packet transport system for mixed traffic in which a packet fragmentation protocol allows traffic of difference classes to occupy a single physical link. Ellis et al discloses in column 7, lines 54 to column 8, lines 40 that since packets within the broadband network are of fixed or variable length, the delay is based on a defined length such as 16Kbytes of low priority data (data-delay insensitive) being transmitted. Therefore, it would have been obvious to one of ordinary skills in the art to modify the teachings of Gurusami in view of Valencia to include the delay based on defined length NDSI being transmitted as taught by Ellis et. al in order to accurately account for and alter non-sensitive traffic causing delay in a coexisting link to efficiently transport delay sensitive traffic with minimal switching and assembly delays.

Regarding claims 3, Gurusami discloses in col. 7, lines 40-45 of transmitting delay sensitive packets (telephony) and non-delay sensitive (data) packets over a communications link. Gurusami discloses in col. 6, lines 42-58 that transmission for each device is specified with twelve bytes of payload. Valencia discloses in figure 4 and col. 9, lines 9-31 when the receiver being able to distinguish by monitoring if a latency-sensitive packet such as a UDP voice packet is received or latency-insensitive packet such as data. Based on the latency sensitivity of the packet, default action of transmission with respect to fragmentation or without fragmentation takes place. Gurusami in view of Valencia fails to explicitly disclose a defined length of NDSI (Non-delay sensitive information) being transmitted. Ellis et al teaches of an efficient packet transport system for mixed traffic in which a packet fragmentation protocol allows traffic of difference classes to occupy a single physical link. Ellis et al discloses in column 7, lines 54 to column 8, lines 40 that since packets within the broadband network are of fixed or variable length, the delay is based on a defined length such as 16Kbytes of low priority data (data-delay insensitive) being transmitted. Therefore, it would have been obvious to one of ordinary skills in the art to modify the teachings of Gurusami in view of Valencia to include the delay based on defined length NDSI being transmitted as taught by Ellis et. al in order to accurately account for and alter non-sensitive traffic causing delay in a coexisting link to efficiently transport delay sensitive traffic with minimal switching and assembly delays.

Regarding claim 12, Gurusami further discloses the steps of:

maintaining a list of transmission times for received initial DSI **[the receiver measures the packet arrival time for each transmitter, thus inherently maintains a list of times of**

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received packets times, see col. 7, lines 50-55 and claim 1 and fig. 10]; establishing a transmission time for each received initial DSI [the receiver determines the delay factors being dependent upon the packet arrival time and communicates to each transmitter dependent upon the corresponding transmitter delay factor times, see col. 7, lines 58 to col. 8, lines 5]; and updating the list when an initial DSI is received [the list of packet arrival times are inherently updated and measured every time an packet (telephony) arrives at the receiver, col. 7, lines 40-60] as claim.

Regarding claim 16, Gurusami discloses a method for delaying of transmission of a set of packets associated with a packet flow **[each receiver transmits packets of telephony-voice communication over a link to each transmitter after applying a delay factor for each transmitter, col. 7, lines 57 to col. 8, lines 5 and see fig. 10]** the method comprising:

Gurusami clearly shows the determination of the initial packet as the initial DSI in col. 7, lines 40-57, where the receiver receives a plurality of telephony packets and measures and identifies the packet arrival time of each packet. The first of the plurality of telephony packets is interpreted as the initial DSI packet. Thereafter, the receiver of Gurusami applies a delay factor based on the packet arrival time and Gurusami selectively applies the delay at each transmitter based on the packet arrival time for the corresponding transmitter as disclosed in col. 7, lines 57 to col. 8, lines 10 consistent with the specification of the Applicant.

transmitting an initial DSI after selectively applying a delay to the DSI based on the (received packet arrival time) parameter associated with the DSI of the packet **[each receiver transmits packets of telephony-voice communication to each transmitter after applying a**

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delay factor, which is the packet arrival time parameter for each transmitter, col. 7, lines 57 to col. 8, lines 5 and see fig. 10; Note: according to col. 7, lines 57 to col. 8, lines 10.

Gurusami et al establishes that the delay factor is determined based on the packet arrival time and Gurusami selectively applies the delay at each transmitter based on the packet arrival time from the corresponding transmitter. By amending the claim to include the word, "selectively", does not further limit the claim since, "selectively" based on the given broadest reasonable interpretation consistent with the specification suggests merely applying delay to some or all received delay sensitive information (DSI) packets.] where

such delay is based on a determined periodicity (parameter) of received DSI [the receiver first measures a packet arrival time of each packet from each transmitter and determines a delay factor for each transmitter, each of the transmitter delay factors being dependent upon the packet arrival time from the corresponding transmitter, see col. 7, lines 40-60 and fig. 10; *Note: periodicity is the consecutive packets being received by the receiver with respective arrival times from which the receiver determines the delay factor*]. Although Gurusami discloses in col. 7, lines 40-45 of packets of telephony and data, *Gurusami fails to disclose of explicitly identifying or distinguishing a received delay sensitive information (DSI) and non-delay sensitive information (NDSI)*. Valencia further discloses in figure 4 and col. 9, lines 9-31 when the receiver being able to distinguish by monitoring if a latency-sensitive packet such as a UDP voice packet is received or latency-insensitive packet such as data. Based on the latency sensitivity of the packet, default action of transmission with respect to fragmentation or without fragmentation takes place. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Gurusami to include the features of

distinguishing between delay sensitive and delay insensitive packets as taught by Valencia. One is motivated as such in order to cause a downlink to increase the size of a maximum allowed transferable unit for the link.

Gurusami in view of Valencia fails to explicitly disclose a defined length of NDSI (Non-delay sensitive information) being transmitted. Ellis et al teaches of an efficient packet transport system for mixed traffic in which a packet fragmentation protocol allows traffic of difference classes to occupy a single physical link. Ellis et al discloses in column 7, lines 54 to column 8, lines 40 that since packets within the broadband network are of fixed or variable length, the delay is based on a defined length such as 16Kbytes of low priority data (data-delay insensitive) being transmitted. Therefore, it would have been obvious to one of ordinary skills in the art to modify the teachings of Gurusami in view of Valencia to include the delay based on defined length NDSI being transmitted as taught by Ellis et. al in order to accurately account for and alter non-sensitive traffic causing delay in a coexisting link to efficiently transport delay sensitive traffic with minimal switching and assembly delays.

Regarding claim 17, Gurusami discloses a method for delaying of transmission of a set of packets associated with a packet flow **[each receiver transmits packets of telephony-voice communication over a link to each transmitter after applying a delay factor for each transmitter, col. 7, lines 57 to col. 8, lines 5 and see fig. 10]** the method comprising:

Gurusami clearly shows the in response to determination of the initial packet as the initial DSI in col. 7, lines 40-57, where the receiver receives a plurality of telephony packets and measures and identifies the packet arrival time of each packet. The first of the plurality of

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telephony packets is interpreted as the initial DSI packet. Thereafter, the receiver of Gurusami applies a delay factor based on the packet arrival time and Gurusami selectively applies the delay at each transmitter based on the packet arrival time for the corresponding transmitter as disclosed in col. 7, lines 57 to col. 8, lines 10 consistent with the specification of the Applicant.

transmitting an initial DSI after selectively applying a delay to the DSI based on the (received packet arrival time) parameter associated with the DSI of the packet **[each receiver transmits packets of telephony-voice communication to each transmitter after applying a delay factor, which is the packet arrival time parameter for each transmitter, col. 7, lines 57 to col. 8, lines 5 and see fig. 10; Note: according to col. 7, lines 57 to col. 8, lines 10.**

Gurusami et al establishes that the delay factor is determined based on the packet arrival time and Gurusami selectively applies the delay at each transmitter based on the packet arrival time from the corresponding transmitter. By amending the claim to include the word, "selectively", does not further limit the claim since, "selectively" based on the given broadest reasonable interpretation consistent with the specification suggests merely applying delay to some or all received delay sensitive information (DSI) packets.] where

such delay is based on a determined periodicity (parameter) of received DSI [the receiver first measures a packet arrival time of each packet from each transmitter and determines a delay factor for each transmitter, each of the transmitter delay factors being dependent upon the packet arrival time from the corresponding transmitter, see col. 7, lines 40-60 and fig. 10; *Note: periodicity is the consecutive packets being received by the receiver with respective arrival times from which the receiver determines the delay factor*]. Although Gurusami discloses in col. 7, lines 40-45 of packets of telephony and data, *Gurusami fails to disclose of determining whether*

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the received DSI is an initial DSI and to explicitly identify or distinguish a received delay sensitive information (DSI) and non-delay sensitive information (NDSI). Valencia discloses in col. 9, lines 9-31 of receiving a first latency-sensitive packet such as a UDP voice packet. Valencia further discloses in figure 4 and col. 9, lines 9-31 when the receiver being able to distinguish by monitoring if a latency-sensitive packet such as a UDP voice packet is received or latency-insensitive packet such as data. Based on the latency sensitivity of the packet, default action of transmission with respect to fragmentation or without fragmentation takes place. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Gurusami to include the features of distinguishing between delay sensitive and delay insensitive packets as taught by Valencia. One is motivated as such in order to cause a downlink to increase the size of a maximum allowed transferable unit for the link.

Regarding claim 18, Gurusami discloses in col. 7, lines 40-45 of transmitting delay sensitive packets (telephony) and non-delay sensitive (data) packets over a communications link. Gurusami discloses in col. 6, lines 42-58 that transmission for each device is specified with twelve bytes of payload. Gurusami clearly shows the in response to determination of the initial packet in not the initial DSI in col. 7, lines 40-57, where the receiver receives a plurality of telephony packets and measures and identifies the packet arrival time of each packet. The second of the plurality of telephony packets is interpreted as not the initial DSI packet. Thereafter, the receiver of Gurusami applies a delay factor based on the packet arrival time and Gurusami selectively applies the delay at each transmitter based on the packet arrival time for the

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corresponding transmitter as disclosed in col. 7, lines 57 to col. 8, lines 10 consistent with the specification of the Applicant. *Gurusami fails to explicitly identify or distinguish a received delay sensitive information (DSI) and non-delay sensitive information (NDSI).* Valencia discloses in col. 9, lines 9-31 of receiving a first latency-sensitive packet such as a UDP voice packet. Valencia further discloses in figure 4 and col. 9, lines 9-31 when the receiver being able to distinguish by monitoring if a latency-sensitive packet such as a UDP voice packet is received or latency-insensitive packet such as data. Based on the latency sensitivity of the packet, default action of transmission with respect to fragmentation or without fragmentation takes place. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Gurusami to include the features of distinguishing between delay sensitive and delay insensitive packets as taught by Valencia. One is motivated as such in order to cause a downlink to increase the size of a maximum allowed transferable unit for the link.

Gurusami in view of Valencia fails to explicitly disclose applying the delay to the DSI after NDSI being transmitted. Ellis et al teaches of an efficient packet transport system for mixed traffic in which a packet fragmentation protocol allows traffic of difference classes to occupy a single physical link. Ellis et al discloses in column 7, lines 54 to column 8, lines 40 that since packets within the broadband network are of fixed or variable length, the delay is based on a defined length such as 16Kbytes of low priority data (data-delay insensitive) being transmitted. Therefore, it would have been obvious to one of ordinary skills in the art to modify the teachings of Gurusami in view of Valencia to include the delay based on defined length NDSI being transmitted as taught by Ellis et. al in order to accurately account for and alter non-

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sensitive traffic causing delay in a coexisting link to efficiently transport delay sensitive traffic with minimal switching and assembly delays.

Regarding claim 19, Gurusami discloses in col. 7, lines 40-45 of transmitting telephony voice data, which in the art is considered delay sensitive information, clearly establishing transmitting the DSI over a communication link of a communication network as claim.

Regarding claim 20, Although Gurusami discloses in col. 7, lines 40-45 of packets of telephony and data, *Gurusami fails to explicitly identify or distinguish a received delay sensitive information (DSI) and non-delay sensitive information (NDSI) is transmitted over the communication link.* Valencia discloses in figure 4 and col. 9, lines 9-31 when the receiver being able to distinguish by monitoring if a latency-sensitive packet such as a UDP voice packet is received or latency-insensitive packet such as data. The respective section suggests the simultaneous transmission of delay sensitive and insensitive packets are transmitted over one link. Based on the latency sensitivity of the packet, default action of transmission with respect to fragmentation or without fragmentation takes place. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Gurusami to include the features of transmission of DSI and NDSI over one link as taught by Valencia. One is motivated as such in order to cause a downlink to increase the size of a maximum allowed transferable unit for the link

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Gurusami et al. (U.S. Patent No. 6,031,846) in view of Ellis et al (U.S. Patent No. 5,497,71).

Regarding claim 13, Regarding claim 1, Gurusami discloses a method for transmitting DSI (Delay Sensitive Information) and non-delay sensitive information (NDSI) over a communication link of a communication network **[each receiver transmits packets of telephony-voice and data communication signals over a link to each transmitter after applying a delay factor for each transmitter, col. 7, lines 57 to col. 8, lines 5 and see fig. 10]** the method comprising the steps of:

transmitting an initial DSI after selectively applying a delay to the initial DSI **[each receiver transmits packets of telephony-voice communication to each transmitter after applying a delay factor for each transmitter, col. 7, lines 57 to col. 8, lines 5 and see fig. 10; Note: according to col. 7, lines 57 to col. 8, lines 10.**

Gurusami et al establishes that the delay factor is determined based on the packet arrival time and Gurusami selectively applies the delay at each transmitter based on the packet arrival time from the corresponding transmitter. By amending the claim to include the word, "selectively", does not further limit the claim since, "selectively" based on the

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given broadest reasonable interpretation consistent with the specification suggests merely applying delay to some or all received delay sensitive information (DSI) packets.]
where

such delay is based on a determined periodicity of received DSI **[the receiver first measures a packet arrival time of each packet from each transmitter and determines a delay factor for each transmitter, each of the transmitter delay factors being dependent upon the packet arrival time from the corresponding transmitter, see col. 7, lines 40-60 and fig. 10; Note: periodicity is the consecutive packets being received by the receiver with respective arrival times from which the receiver determines the delay factor]**.

Gurusami discloses in col. 6, lines 42-58 that transmission for each device is specified with twelve bytes of payload. Gurusami fails to explicitly disclose a defined length of NDSI (Non-delay sensitive information) being transmitted. Ellis et al teaches of an efficient packet transport system for mixed traffic in which a packet fragmentation protocol allows traffic of difference classes to occupy a single physical link. Ellis et al discloses in column 7, lines 54 to column 8, lines 40 that since packets within the broadband network are of fixed or variable length, the delay is based on a defined length such as 16Kbytes of low priority data (data-delay insensitive) being transmitted. Therefore, it would have been obvious to one of ordinary skills in the art to modify the teachings of Gurusami et al to include the delay based on defined length NDSI being transmitted as taught by Ellis et. al in order to accurately account for and alter non-sensitive traffic causing delay in a coexisting link thus efficiently transporting delay sensitive traffic with minimal switching and assembly delays.

Regarding claim 14, Gurusami discloses in figure 1 of apparatus (NIU 15) configured as an IAD coupled to subscriber equipment (16 and 18) and to an access network 13 as claim.

Regarding claim 15, Gurusami discloses in figure 1 of an apparatus (NIU 15, fig. 1) configured as part of host equipment (such as computer 16, fig. 1) where such host equipment is coupled to an access network (telephone network, fig. 4) and to a packet based communication network (see fig. 4, data packet network).

Allowable Subject Matter

7. Claims 4-11 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 7/26/06 have been fully considered but they are not persuasive.

The claim 3 features incorporated into claim 1 does not render the claim allowable. Examiner has respectfully presented a rejection under 35 USC 103 (a) for claim 3 as being unpatentable under Gurusami in view of Valencia and further in view of Ellis.

Applicant argues with respect to claims 3 (and amended claims that Ellis fails to cure the fundamental deficiencies of Gurusami and Valencia and fails to provide any suggestion or

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motivation for modifying the cited art to arrive motivation to arrive at the Applicants' claimed invention.

Examiner respectfully disagrees and redirects Applicant to Ellis reference, specifically to col. 8, lines 18-40. Ellis clearly establishes that a maximum packet size of 16Kbytes may be allocated to NDSI data packets and 64Kbytes to DSI voice/video packets. Allocating a higher maximum packet size for voice and video packet ensures minimal switching and assembly delays. Thus, the purpose of introducing Ellis reference was to establish that in a voice/video and data environment, it is very common to define the length of low priority NDSL data packets to ensure no priority packets are lost and minimize the delay for DSL packets.

Examiner respectfully believes that Gurusami et al. teaches, "determining that the received DSI is an initial DSI," prior to transmission. According to the claim 17, the limitation states in response to determining that the received DSI is an initial DSI, transmitting the received DSI based on a transmission periodicity of a DSI packet in the set of packets. The first question that arises is what is an initial DSI? As stated in the MPEP 2111 and the case law *In re Hyatt*, 211 R.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000), during patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification. Based on the specification on pages 8 and 11, initial DSI packet is merely a delay sensitive packet such a voice or telephony packet that is primary received and a delay factor is applied to such a packet. The broadest reasonable interpretation consistent with the specification that the Examiner interprets is, the first of plurality of telephony packets is the initial DSI packet with a packet arrival time.

Gurusami clearly shows for claims argued that the determination of the initial packet as the initial DSI in col. 7, lines 40-57, where the receiver receives a plurality of telephony packets and measures and identifies the packet arrival time of each packet. The first of the plurality of telephony packets is broadly interpreted as the initial DSI packet. Thereafter, the receiver of Gurusami applies a delay factor based on the packet arrival time and Gurusami selectively applies the delay at each transmitter based on the packet arrival time for the corresponding transmitter as disclosed in col. 7, lines 57 to col. 8, lines 10 consistent with the specification of the Applicant. This suggests that each receiver transmitting packets of telephony-voice (received DSI) communication to each transmitter after applying a delay factor (transmission periodicity), which is the packet arrival time parameter for each transmitter. The initial DSI received in Gurusami is presumed to be a telephony voice packets among data packets.

Applicant argues with respect to claim 12 that the page referring to measuring arrival times does not refer to maintaining a list of transmission times. Examiner respectfully disagrees and directs applicant to claim 1. Gurusami clearly establishes that the receiver means clearly identifies the latest arrival packet, which is as large as any other packet arrival time. This suggests of comparisons of arrival times to determine the delay establishing that a memory or table inherently exists for listing the transmission times.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7682. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cgs

September 1, 2006



Chirag Shah
Patent Examiner, Division 2616